



Serial No.: 09/889,364

Confirmation No.: 3769

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Atty. Ref.: 11836.0691.PCUS00

**AMENDMENTS TO THE CLAIMS:**

Please amend the claims as follows:

1. (Currently Amended) An electrically conductive invert emulsion wellbore fluid comprising:
  - i) from about 0.2% to about 10% by volume of carbon black particles, and
  - ii) one or more emulsifying surfactant(s) selected from the ~~class including~~: nonionic emulsifiers of Hydrophilic-Lipophilic Balance (HLB) less than about 12, and anionic surfactants wherein the counter-ion (~~cation~~) is any of alkali metal, ammonium, or hydrogen ions, and

wherein the wellbore fluid is substantially free of polyvalent metal cations and wherein the wellbore fluid has conductivity of at least  $10^4$   $\mu$ S/m.
2. (Original) A wellbore fluid according to Claim 1 wherein the carbon black exhibits a specific surface area of at least  $500 \text{ m}^2/\text{g}$ , and preferably of at least  $1500 \text{ m}^2/\text{g}$ .
3. (Currently Amended) A wellbore fluid according to ~~any preceding Claim~~ claims 1 or 2 wherein the nonionic emulsifier(s) is (are) selected from the ~~class including~~ group comprising: diethanolamides based on fatty acids of more than 12 carbon atoms, alkoxyated fatty alcohols, alkoxyated alkylphenols, and ethylene oxide propylene oxide block polymers.
4. (Currently Amended) A wellbore fluid according to ~~any preceding Claim~~ claim 1 or 2 wherein the anionic surfactant(s) is (are) selected from the ~~class including~~ group comprising: alkane sulphonates, alpha olefin sulphonates, alkyl arene sulphonates, polyolefin sulphonates and acyl taurates, all characterised by the carbon number of the hydrophobic moiety being at least about 12, and by the counter-ion (cation) being any of alkali metal, ammonium, or hydrogen ions.
5. (Currently Amended) A wellbore fluid according to ~~Claims 1 to 4~~ claim 1 or 2 wherein the anionic surfactant(s) is (are) selected from the ~~class including~~ group comprising: fatty acids of 12 or more carbon atoms, phosphate esters of ethoxylated alcohols of 12 or more carbon atoms, phosphate esters of ethoxylated alkyl phenols of 14 or more carbon atoms, and alkyl aminomethylene phosphonates wherein the alkylamine precursor contains 12 or more carbon



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atoms, all characterised by the counter-ion (cation) being any of alkali metal ion, ammonium, or hydrogen ions.

6. (Currently Amended) A wellbore wellbore fluid according to ~~any preceding Claims~~ claims 1 or 2 in which the total dose of emulsifier(s) is in the range 0.5% to 10% by weight.

7. (Currently Amended) A wellbore fluid according to ~~any preceding Claim~~ claims 1 or 2 further comprising a containing any material capable of precipitating or complexing polyvalent metal cations.

8. (Currently Amended) A wellbore fluid according to Claim 8 wherein the emulsified brine phase contains dissolved anions ~~such as phosphate, carbonate, silicate~~ which will form insoluble precipitates with ~~any the~~ ions of calcium, magnesium or iron cations.

9. (Currently Amended) A wellbore fluid according to Claim 8 wherein the complexing agent is selected from the ~~class including~~ group comprising: the alkali metal or ammonium salts, or the free acids, of citric acid, gluconic acid, glucoheptanoic acid, ascorbic acid, erythorbic acid, nitrolotriacetic acid, ethylene diamine tetraacetic acid, diethylenetriamine pentaacetic acid, hydroxyethylidene diphosphonic acid, nitrolotrismethylenephosphonic acid, aminomethylene phosphonates based on ethylene diamine or diethylene triamine or higher ethyleneamines, and polyphosphates such as tetrasodium pyrophosphate.

10. (Currently Amended) A method of drilling or completing a well wherein the wellbore fluid used is as in ~~any preceding Claim~~ 1 or 2.

11. (Currently Amended) A method of providing enhanced information from electrical logging tools, measurement-while-drilling (MWD), logging-while-drilling (LWD), geosteering and the like wherein the efficiency is enhanced by the improved electrical conductivity of any of the wellbore fluids as in Claims 1 ~~to 9~~ or 2.

12. (New) A fluid of claim 8, wherein the polyvalent metal cation is selected from the group consisting of calcium, magnesium and iron ions.